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PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: ACTIVITIES OF THE CONFERENCE SECRETARIAT: REPORT OF THE SECRETARY-GENERAL OF THE CONFERENCE

Report of the Secretary-General of the Conference

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INTRODUCTION

1. The larger vision of a more secure, more hopeful and more equitable world to which the goals established by the General Assembly in resolution 44/228 are directed, inspires and guides the work of the Preparatory Committee of the United Nations Conference on Environment and Development and the ad hoc secretariat which serves it. But that larger vision will only be realized in the less than two years remaining before the 1992 Conference through an intensive and comprehensive programme of work involving a wide range of practical steps based on decisions to be taken by the Preparatory Committee.

2. This report is designed to illuminate those steps and assist the Preparatory Committee in the important decisions it must make in guiding and directing them. It presents a summary of the activities of the Conference Secretariat in respect of both the organizational and substantive aspects of the work.

I. ORGANIZATIONAL MATTERS

3. Based on General Assembly decision 44/466, the headquarters of the ad hoc Conference secretariat have been established in Geneva on premises generously provided by the Government of Switzerland. A secretariat unit has been established in New York, and arrangements are being made for establishment of the unit in Nairobi. The recruitment of its staff and the provision of necessary support facilities and services are well under way.

4. Excellent co-operation has been established between the Conference secretariat and the United Nations Environment Programme (UNEP) and other agencies, organizations and programmes of the United Nations system. This has been manifest particularly in respect of the preparation of the accompanying overview prepared by the Designated Officials for Environmental Matters, through consultations in the Administrative Committee on Co-ordination at Vienna and at the meeting of the executive secretaries of the regional commissions at Baghdad, both in May 1990. These provide a sound and promising basis for the continued close co-operation and consultation that is so important to the Conference preparatory process.

5. In order to facilitate United Nations support for preparations for the Conference at the country level in developing countries, arrangements have been made by the Administrator of the United Nations Development Programme (UNDP) for Resident Representatives to become the country representatives of the Conference secretariat.

6. Consultation and co-operation with other intergovernmental and non-governmental organizations have been initiated. They too promise to make important contributions to the preparations for the Conference. Arrangements for the regional conferences provided for by the Preparatory Committee in decision I adopted at its organizational session are now being made by the regional commissions in co-operation with the Conference secretariat. The Secretary-General of the Conference participated in the conference of the region of the Economic

Commission for Europe (ECE) held at Bergen, Norway, in May and, in co-operation with the Government of Norway and ECE, will help to make the experience and the results of that conference available to the other regional commissions in preparing the conferences in their respective regions.

7. A global information network has been established by the Conference secretariat, using systems developed by the Department of Public Information, as a means of making information concerning the Conference and its preparations broadly available to interested parties throughout the world. Co-operation is also being established between the Conference secretariat and UNDP to link the network closely with the information component of the sustainable development network being established by UNDP.

8. In addition to the voluntary fund established by the Preparatory Committee pursuant to General Assembly resolution 44/228, on which a separate report is being made, the Conference secretariat is seeking extrabudgetary resources in order to facilitate its access to especially important contributions to the preparatory process which would not otherwise be available, particularly through the full participation of institutions and experts from developing countries in various aspects of the preparatory process. Special efforts are being made to mobilize support from the donor community for assistance to developing countries in their national preparations for the Conference, including preparation of their national reports, and to do so in ways which help to strengthen their institutional and professional capacities.

II. SUBSTANTIVE WORK

9. The substantive work of the Conference secretariat has concentrated on preparations for the first substantive session of the Preparatory Committee.

A. International aspects

10. This report deals largely with the international aspects of the issues to be addressed by the Conference and focuses on the considerations bearing on the recommendations of the Preparatory Committee with respect to action to be taken at the international level on those issues. This stems from the fact that the report is based almost exclusively on the information provided by the agencies, organizations and programmes of the United Nations system and other intergovernmental and non-governmental organizations. National reports and the results of regional conferences - except for the conference of the ECE region held at Bergen, Norway - are not yet available. It is important to bear in mind that action taken to address the issues must be at the national level. International action at regional and global levels must be firmly rooted in national policies and action and must be designed primarily to support, complement and supplement them.

11. The decisions to be taken by the Committee at its first substantive session will cover a broad and complex range of subject-matter and will largely determine the direction, content and pace of the preparatory process required to ensure the achievement of the goals of the Conference.

12. Annex I of this report outlines in synoptic tabular form the main components of each major issue identified in General Assembly resolution 44/228 and referred to in the report of the organizational session of the Preparatory Committee for the Conference (A/44/48 and Corr.1 and 2, of 20 March 1990). It also describes the current state of activities within the United Nations system and elsewhere which bear on the purposes of the Conference and the preparatory process. It also helps to point to the principal options for action for consideration by the Preparatory Committee in the major areas to be addressed by the Conference, in respect of each issue, and to identify gaps in existing activities which the Preparatory Committee may wish to address.

13. The report is based primarily on

(a) The overview of United Nations system-wide activities relevant to General Assembly resolution 44/228 (A/CONF.151/PC/6);

(b) Information provided at the request of the Conference secretariat by other governmental and non-governmental organizations active at the international level, presented in summary form (A/CONF.151/PC/7);

and therefore the three should be considered together. The principal documents relevant to the activities referred to in the overview and the summary will be available in their original languages in Nairobi, for reference, as required by the Preparatory Committee and its working groups.

14. The compilation and consolidation of the information contained in the overview was a formidable undertaking, made possible only by the exceptional co-operation of the United Nations agencies, organizations and programmes participating as Designated Officials for Environmental Management (DOEM), under the leadership of the United Nations Environment Programme. The work was greatly facilitated by consultations with the Committee of International Development Institutions on the Environment (CIDIE). The products of the work represent a valuable contribution to the preparatory process and provide the initial information base for it.

15. However, the information thus available for the preparatory process is not totally comprehensive or complete. Most of the information provided by agencies, organizations and programmes of the United Nations system and other organizations pertains to activities of an ongoing nature not specifically designed to meet the purposes of the Conference. Other activities relevant to the Conference and its purposes may also be under way or planned which have not been included or adequately reflected in this information. This is particularly true of the wide range of development activities which, though not explicitly related to the environment, have significant environmental implications. It is therefore important that the existing information base be supplemented and updated by the secretariat as additional information becomes available, through the sources already mentioned and through the national reports to be prepared by member States.

16. The agencies, organizations and programmes that provided the information were asked by the United Nations Secretariat to indicate the objectives and expected results of each activity on which they reported and the extent to which it might be

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desirable and feasible to accelerate or enhance those results through the Conference and its preparatory process. This has not been easy to do since, in many cases, the activities concerned are of an ongoing nature and do not readily lend themselves to the kind of explicit results that might be expected from the Conference. The information provided is nevertheless useful to the Preparatory Committee as a basis for its decisions as to the objectives and desired results of the Conference in the areas concerned.

17. In providing guidance on the activities in relation to the objectives and expected results of the Conference, the Preparatory Committee may wish to consider how it can best add impetus to and support those activities that will reinforce and strengthen the results. It is important also that the agencies, organizations and programmes of the United Nations system undertaking new or expanded activities relating to matters to be addressed by the Conference do so in close co-operation with the secretariat of the Conference.

18. The ongoing activities in respect of each issue being addressed by the Conference and the preparatory process in the same subject area will proceed on parallel action pathways which are separate and distinct, even in cases where they are almost fully integrated one with the other, and must in all cases interact closely and strengthen and reinforce each other. This underscores the importance, to the success of the preparatory process, of the co-operation by the agencies, organizations and programmes of the United Nations system and other intergovernmental and non-governmental organizations whose interests and activities are directly relevant to the agenda and the objectives of the Conference. The co-operation already initiated provides a highly positive and promising basis for continuing co-operation.

B. Regional aspects

19. The ECE regional conference held in May at Bergen, Norway, the regional meetings to be held in the other regions and other important conferences, studies and events will contribute substantially to the information available to the Preparatory Committee as its work continues. That information will be incorporated into the secretariat information base as it becomes available.

20. Preparations for the regional conferences will be the subject of a separate report to the Preparatory Committee.

C. Contributions by national and non-governmental organizations

21. To facilitate the preparation of national contributions to the preparatory process, the secretariat has compiled guidelines (A/CONF.151/PC/8) for consideration of the Preparatory Committee. Likewise, suggestions have been made for the involvement of non-governmental organizations (A/CONF.151/PC/9).

D. Linkages between sectoral and cross-sectoral areas

22. The information in annex I below is based on the requirement set by the General Assembly in resolution 44/228 and the related decisions of the Preparatory Committee that cross-sectoral issues be dealt with on a broad basis with a view to ensuring that environment and development issues are treated in a consistent and integrated manner. It is therefore important that cross-sectoral issues such as technology, finance, legal issues and institutions be dealt with in respect of each individual issue as well as on a more broad and comprehensive basis. This will require a very close linkage between the work on individual sectoral issues carried out by the working groups and the more broad and comprehensive work to be undertaken by the Preparatory Committee in respect of the cross-sectoral issues. In the light of the importance of these issues, the Preparatory Committee may wish to take an early decision as to how it will deal with them in the continuing preparatory work. Brief summaries in respect of the major cross-sectoral issues are included in annex II below.

23. It is of particular importance in the work of the Preparatory Committee that the linkages which exist between the sectoral and cross-sectoral issues be illuminated and supported by a great degree of knowledge and analysis of the systemic and interacting nature of the cause and effect relationships which bear on the ultimate consequences of policy decisions and other related action. In this regard co-operation has been established with the International Institute of Applied Systems Analysis (IIASA) to provide guidance and assistance to the preparatory process in respect of this important aspect of its work.

24. Although the question of the "global commons" is not addressed separately in the present report, General Assembly resolution 44/228 on the report of the Preparatory Committee (A/44/48), it will be dealt with as an important and integral aspect of the work programme of the Preparatory Committee and its working groups - e.g., when dealing with oceans and atmosphere.

25. Similarly the problem of environmental refugees, caused by degradation of environmental quality and natural resources, although not explicitly discussed in the report, needs to be addressed.

III. THE NEED FOR COSTING

26. Another extremely important subject to be considered by the Preparatory Committee for each item on its agenda will be the economic and cost implications. These must be evaluated both in overall cost/benefit terms and in terms of the estimated costs of specific actions to be recommended by the Preparatory Committee for decision at the Conference. Related to this will be the need by the Preparatory Committee for information that will enable it to make specific recommendations on the sources and modalities of the financing required in each case and the institutional mechanisms through which such funds will be obtained and used. As yet, very little information is available on the costs/benefits of the issues to be addressed, the costs of the current activities designed to deal with those issues, or the estimated costs of proposed future action. However, some

useful and promising work is being undertaken - for example, the work carried out through UNEP to define the costs to developing countries of phasing out their use and production of chlorofluorocarbons.

IV. AREAS OF PRINCIPAL ACTION BY THE CONFERENCE

27. It will be evident from an examination of the information provided in the overview, the summary of activities and in annex I below, that the current state of the action process in respect of the issues varies a great deal from issue to issue. The Preparatory Committee may wish, therefore, to examine particularly:

(a) The urgency and immediacy of each issue;

(b) The actual scope and extent of existing activities and the priority being accorded to them in terms of allocation of human, technical and financial resources;

(c) The gaps in such existing activities from the point of view of the Conference and its preparatory process, which the Preparatory Committee may wish to bring to the attention of the relevant agencies, organizations and programmes, together with suggestions as to how such gaps may be best filled;

(d) The degree to which the desired objectives and results for the 1992 Conference relate to the existing activities as reported.

28. Some common themes, outlined below, as to possible action by the Conference can be deduced from a review of this information.

(a) The environment/development nexus provides the basic theme for the Conference and must guide its preparatory work in all other areas. Of particular importance is the need to examine how the synthesis between environment and development can be effected in policy and practical terms at all levels. How best to formulate and present to the Conference recommendations for policies and other measures designed to give effect to the environment/development synthesis at the national level and supporting measures at the international level will be especially critical and pervasive matters for consideration by the Preparatory Committee;

(b) A special study to be followed by a symposium has been initiated by the Secretariat with the support of the Netherlands Government and UNDP in co-operation with the United Nations Conference on Trade and Development (UNCTAD) and others. It will examine in depth the degree to which environmental factors and the need for sustainability will require fundamental changes in the nature, dynamics, and direction of the development process itself and how those changes may best be brought about. The project will focus particularly on policy options and practical measures designed to give effect to the environment/development relationship at all levels from economic and sectoral policies through their implementation and appropriate mechanisms for accountability. Its aim is to contribute important new perspectives and analyses to the work of the preparatory process;

(c) Legal measures, including new conventions and the strengthening or expansion of existing conventions and measures for implementation, compliance and dispute-settlement are required in a number of cases;

(d) Financial resources are the principal constraint on the acceleration or enhancement of action in respect to virtually all issues. This is true for the resources required to carry out agreed activities at the international level. But it is true to a vastly greater degree of the new and additional resources required by developing countries in order to incorporate appropriate measures for environmental care and protection into their national development policies and practices. Also, as indicated above, in virtually all cases much more specific information needs to be developed as a basis for quantifying those costs and needs;

(e) Technology, particularly the need to make the most environmentally sound technologies universally available, is a major element in respect of many areas requiring action. Of special importance are measures required to make such technologies and the capacities to develop and apply them available to developing countries under conditions that are fair and affordable;

(f) Human resources and the related need for education, training and expanded employment opportunities as a critical issue in all areas;

(g) Knowledge and the related need for more targeted research, extended monitoring and assessment are necessary in order to expand the existing capacity to evaluate risks and develop alternative preventive or remedial actions;

(h) Institutions and related structures and processes to provide the instruments for carrying out agreed action need to be re-examined in virtually every area in order to determine what measures need to be taken to change or strengthen existing mechanisms at every level, from that of policy overview and integration and cross-sectoral co-ordination to programmes and operations.

29. It will be noted that these themes correspond largely to the cross-sectoral issues already identified by the General Assembly in resolution 44/228 and by the Preparatory Committee. It is in these areas, therefore, that the Preparatory Committee might wish to focus its attention.

V. AGENDA FOR ACTION AFTER 1992

30. The Conference cannot be expected to deal individually with all of the activities, particularly those of a sectoral nature, that the Preparatory Committee and its working groups will be considering. Except for such items as conventions requiring individual action, which will need a separate place on the Conference agenda, the activities could best be addressed within the framework of a programme of future work to be recommended by the Preparatory Committee for consideration by the Conference as a single agenda item. The programme, covering co-operative action in a broad range of environmnent and development activities, would be designed to ensure the security of the resources and life-sustaining systems of the earth and the progress and well-being of all its peoples in the twenty-first century and beyond.

31. On agreement by the Conference, the work programme, which might be termed "Agenda 21", would constitute a prioritized agenda for the work of the international community in the period following the Conference and into the twenty-first century. It could incorporate, and be based on, the wide range of activities which contribute to the preparatory process for the Conference and the various objectives and actions in respect of such activities recommended to the Conference by the Preparatory Committee. It would include guidelines as to priorities and the assignment of responsibilities on the part of the principal agencies, organizations and programmes concerned. In defining broad goals and targets for the twenty-first century, it would define in more specific terms the interim goals and targets for the remainder of the current century and the activities designed to meet them.

32. This would not be an "action plan" in the traditional sense. Rather, it would provide the framework for a continuing process of review and revision, as well as a means of facilitating and supporting the ongoing processes of co-ordination and co-operation amongst the various actors concerned in the implementation of the activities provided for in the agenda. It would also include a clear definition of the roles and responsibilities of the various sectors and constituencies which must be engaged in and committed to, the action process - e.g., industry, transport, energy, agriculture, urban affairs, trade unions, science, education, culture, women, youth, indigenous peoples etc.

VI. IMPLICATIONS FOR FUTURE WORK

33. On the basis of the decisions taken and the guidance provided by the Preparatory Committee, the next phase of the preparatory work will need to concentrate on:

(a) Improving the information base, particularly as to the cost/benefit analyses and the costing of actions being considered by the Preparatory Committee for possible recommendation to the Conference;

(b) The development of a specific work programme and timetable designed to ensure that the objectives and results decided by the Preparatory Committee in respect of each agenda item will be achieved, including determination of the role of the principal contributors to such work programmes and the main contributing events - e.g., studies, reports, conferences, seminars etc.;

(c) The regional conferences to be held by the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic Commission for Africa (ECA), and incorporation of the results of these conferences, together with the results of the Economic Commission for Europe (ECE) conference held in Bergen, into the preparatory work;

(d) Implementation of special measures, including technical assistance, to ensure the full participation of developing country institutions and experts in the preparatory work and the mobilization of the support necessary to accomplish it;

(e) Support for Conference preparations at the national level, including preparation of national reports, with particular emphasis on mobilizing support that developing countries may desire in this respect; the analysis and incorporation of the information provided in these reports into the preparatory process.

Annex I

MAJOR ENVIRONMENTAL ISSUES

1. General Assembly resolution 44/228 specifies that the Conference will consider various "environmental issues which are of major concern in maintaining the quality of the Earth's environment and especially in achieving environmentally sound and sustainable development in all countries". Nine major and several subsidiary issues are identified, without any particular order of priority.

2. This annex presents a very brief overview of these issues in tabular form. Each begins with a synopsis describing the major environmental and developmental causes and effects of the problem and lists the objectives of current activities. This is followed by three columns, the first of which contains a sampling of the major current activities; the second lists major results and results of these activities which could contribute to the work of the Conference; the third highlights options for action by the Conference. Finally, some considerations are indicated, highlighting major constraints or underlying problems or ideas which could be kept in mind when discussing the options for action. Most of the issues were assigned to specific working groups by the Preparatory Committee at its organizational session, and this is indicated on each of the tables, where relevant.

3. This annex should be read in conjunction with the overview of system-wide activities relevant to resolution 44/228 (A/CONF.151/PC/6) and the summary of activities of intergovernmental and international organizations relevant to that resolution (A/CONF.151/PC/7).

PROTECTION OF THE ATMOSPHERE BY COMBATING CLIMATE CHANGE

(Working Group I)

SYNOPSIS

Human activities world wide, but especially in industrialized countries, are giving rise to emissions of various gases which trap heat near the earth's surface ("greenhouse effect"). This is expected to result in a global shifting of climate patterns, warming, greater weather extremes and turbulence and rising sea levels. Increases in population and related economic development activities may further increase greenhouse gas (GHG) emissions. The greenhouse effect is accepted as ultimately inevitable, but it is still unclear how it will affect regional climate, how soon the changes will occur, how rapidly they could intensify. Over the past 100 years, there has been an observed, globally averaged temperature rise of 0.3-0.6° C. This is consistent with, but not necessarily caused by, global warming induced by GHG emissions to date. Atmospheric models and other analyses indicate that "business-as-usual" growth in emissions of all the gases taken together (present normative trends) would give a potential temperature increase of 1.5-4.5° C. Currently, about half the potential warming is contributed by carbon dioxide (CO_2), mainly from fossil fuel burning (forest clearance contributing significantly), about a quarter comes from halocarbons (chlorofluorocarbons, halons) and the rest from methane (CH_4), nitrous oxide (N_2O) and ozone (O_3). Warming becomes apparent only gradually, after several decades, because the oceans and melting ice take up the heat. Since the atmospheric lifetimes of GHGs can be 10-200 years, warming from current emissions will take a long time to appear and cannot be quickly reversed, even if emissions cease immediately. The impact of climate-induced changes in the socio-economic and environmental spheres and the policy interventions conceived to combat those impacts could lead to social stress and political tensions world wide. While it now seems urgent to embark rapidly on work to reduce as many uncertainties as possible, it also seems prudent to move forward with a number of measures that can be justified in any event, especially those that buy time and have positive effects, whether warming occurs quickly or not.

OBJECTIVES

To increase understanding of the world's climate system and its natural and human-induced variability, sharpen predictions of potential changes and their likely socio-economic and environmental implications and promote development of effective adaptation and response strategies. The main agencies and bodies working in this area are WMO, UNEP, ICSU; ACC Task Force; Advisory Group on Greenhouse Gases, AGG (WMO, UNEP and ICSU). The main forum for discussion is the Inter-governmental Panel on Climate Change, IPCC (WMO, UNEP).

Current activities	Results of current activities	Options for Conference action
Major activities for general climate issues include World Climate Programme (WMO, UNESCO/IOC, UNEP, ICSU). Climate-related activities (FAO, IFAD, WHO, UNDP, World Bank); monitoring and assessment is carried out through World Weather Watch (WMO); assistance to developing countries through CLICOM (WMO/UNDP); analysis of climate change (RRC); bilateral studies on climate change and policy responses.	Essential data on behaviour of Earth's atmosphere and ocean systems; information on effects of pollution and other environmental parameters; increased capability at the national and regional levels.	Increased research on scientific aspects; establish a more comprehensive and sensitive monitoring system; increase support to developing countries.
Intergovernmental discussions take place through IPCC (WMO, UNEP) and Second World Climate Conference (WMO, UNEP, UNESCO, FAO, ICSU), Oct/Nov 1990	IPCC may signal need for a framework convention on climate change. Possible formulation of elements to be included in framework convention.	Develop a framework convention with/without binding protocols; strengthen existing protocols; agree on international action programmes on energy, agriculture, aforestation and other measures; develop adaptive strategies and harmonize contingency planning efforts; enhance research and transfer of technology.

CONSIDERATIONS

Whether priority actions should concentrate on seeking agreements on a "framework" convention, particularly if it is not accompanied by simultaneous agreement on one or more protocols limiting emissions of specific gases or whether primary attention should be given to developing an agreed co-operative programme for research/monitoring and technology transfer, while seeking agreement on a Convention with binding provisions.

The extent to which international agreements and agreed actions should await or be constrained by existing uncertainties in the state of knowledge as to causes, possible offsets and effects of climate change and the extent to which the "precautionary principle" endorsed at the ECE regional conference at Bergen should be applied.

The need to focus on actions which can be taken to reduce emissions of greenhouse gases and to prepare for and ameliorate the potential consequences of climate change which are justifiable on other grounds. This would include measures for greater efficiencies in energy use, changes in the energy mix; more effective anticipatory planning in the development of low-lying coastal area defences.

PROTECTION OF THE ATMOSPHERE BY COMBATING DEPLETION OF THE OZONE LAYER

(Working Group I)

SYNOPSIS

The stratospheric ozone layer protects life from biologically harmful wavelengths of ultraviolet radiation; the vertical distribution of ozone in the atmosphere influences global climate. There is evidence of seasonal collapse of ozone levels over Antarctica and higher than predicted ozone depletion elsewhere - particularly over the northern hemisphere. The main sources of ozone destruction are chlorofluorocarbons (CFCs) - widely used as refrigerants, aerosols, solvents, insulators, and in plastic foam production - and halons, which are used as fire extinguishing agents. Many of the very chemicals that destroy ozone are also greenhouse gases. Present and cumulative past emissions originate mainly from industrialized countries. Scientists now also worry that a violent volcanic eruption could accelerate ozone depletion over mid latitudes beyond current predictions. Ozone-layer depletion would increase cataracts and blindness in humans and animals, damage the immune response system, increase susceptibility to infectious diseases, and cause millions of deaths from skin cancer. Increased ultraviolet radiation could also cause serious declines in productivity of ecosystems, including in agriculture and fisheries.

OBJECTIVES

Phase out chemicals harmful to the ozone layer and develop alternatives; broaden participation of developing countries in negotiations and actions; reach agreements on technology transfer and supplementary financial aid to enable developing countries to bypass/phase out CFC/halon use; monitor effective industrial compliance; continued monitoring and modelling of the state of the ozone layer.

Current activities	Results of current activities	Options for Conference action
1985 Vienna Convention for the Protection of the Ozone Layer - co-operation in research, monitoring and data exchange. 1987 Montreal Protocol on Substances that Deplete the Ozone Layer - provides for 50 per cent reduction of CFCs; second meeting of Parties to the Protocol, London, June, 1990.	London, 1990: agreement on early phase-out of major ozone depleting chemicals (by 2000); possible agreement on limitation of use of chlorine-containing substitutes (HCFCs); possible agreement on financial mechanisms and technology transfer.	Focus on and resolve differences among Parties. Define modes of monitoring compliance. International harmonization of product labelling.
Further scientific and technological reassessments, and meetings of parties in 1991, 1992 and thereafter, ongoing monitoring of ozone layer by the Ozone Network, co-ordinated by WMO. Possible emergency meetings of parties if needed. Country studies to assess global and national costs of implementing Montreal Protocol (UNDP, UNEP).	If threat to ozone layer grows, consider further international actions; develop adaptive strategies to cope with future ozone-layer depletion; improve research, monitoring and assessment.	
Industrial research on substitutes and alternative technologies.	International research and toxicity testing, regional producer and consumer industries.	Consider economic incentives for research and development and technology transfer; devise methods to recycle or destroy existing CFC "bank"; training in new technologies.
Technology transfer to developing countries (UNEP, IBRD, UNDP, UNIDO).	Develop funding mechanisms and technology transfer modes.	
NGO involvement.	Public education and policy research; possible informal monitoring of compliance.	Expand public education and information activities.

CONSIDERATIONS

Agreement on financial assistance and technology transfer is essential for broadened participation in the Montreal Protocol by such potentially large producers/consumers as China, India etc.

Major financial issues are additionality, sources of funding, and institutional mechanisms. Major technology transfer issues include intellectual property rights and ways of involving industry.

The Montreal Protocol process should be kept under continued review in order to evaluate its effectiveness in addressing these issues. If the issues are not settled by the 1990, 1991, or 1992 meetings of the Parties, the Conference will need especially to focus on them. If they are resolved, however, they will serve as precedents for other international accords. Whether or not the Protocol process is successful, there is a need to launch adaptive strategies to decrease ozone levels, including research and development of more resistant genetic material.

PROTECTION OF THE ATMOSPHERE BY COMBATING TRANSBOUNDARY AIR POLLUTION

(Working Group I)

SYNOPSIS

Air pollution is caused by the entire range of economic development activities, from stationary sources of energy production and use (industrial and domestic burning of fossil fuels: CO_2, SO_2, NOx, VOCs), from mobile sources in all transportation sectors (CO, NOx, VOCs), from industrial processes (CO_2, SO_2, NOx, VOCs, heavy metals, persistent organic pollutants); from land use and intensive agricultural practices (CH_4, NH_3); and from consumer products (VOCs, including CFCs).

The impact of air pollution occurs at three levels: locally, severe health effects occur in both urban and industrial areas of developed and developing countries alike; regionally, the environmental damage caused by acid precipitation and photochemical oxidants affects even remote areas at distances of several thousand kilometres from the pollution source; globally, a wide spectrum of air pollutants are known to contribute to ozone depletion, climatic change, and to world-wide degradation of the marine environment. Even though technology is available to control most source categories, the economic costs of control and abatement measures are viewed as the main obstacle. At the same time, energy efficiency and rational energy use are recognized to be among the most effective ways of preventing air pollution at the source.

OBJECTIVES

Monitoring and modelling of transboundary air pollution emissions and effects; standard-setting for ambient air quality, emission reduction, critical pollutant levels/loads; assessment and exchange of technology for air pollution abatement; supporting research, technical assistance and information exchange.

Current activities	Results of current activities	Options for Conference action
Monitoring, modelling and research include Background Air Pollution Monitoring Network (WMO); atmospheric transport for radio-nuclides (WMO, IAEA, EEC); air/sea interchange of pollutants (GESAMP, IMO); emission inventories (OECD, EEC); integrated assessment modelling (IIASA).	Assessment of air pollution in megacities, 1991 (WHO, UNEP). EEC (CORINAIR) emission inventory for 1990; available, 1991/92.	Global extension of monitoring networks or new regional networks (including regional sea areas). Extension of assessments to developing countries (following ICSU/UNEP project on acidification in the tropics).
Regulation and standard-setting include the Convention on Long-range Transboundary Air Pollution (United Nations/ECE); protocols to reduce SO_2 and NOx emissions; EMEP monitoring and modelling programme; assessment of air pollution effects on forests, crops, fresh water, materials and monuments; determination of critical pollutant loads; assessments of control technology and economic costs/ benefits.	Under United Nations/ECE (LRTAP) Convention: EMEP annual emission/ deposition calculations, 1990/92; major (four-year) review of LRTAP implementation, 1991; Nuremberg Seminar on Emission Control Technology, 1991; negotiation of protocol on VOCs, 1990/91, and of revised sulphur protocol, 1991/92.	Measures for broader participation in existing legal instruments or promotion of new regional agreements beyond Europe and North America. Further global or regional harmonization of technical emission standards. Assistance for international exchange of control technologies. Promotion of energy efficiency and rational energy use.
Technical standards for air pollutant emissions from motor vehicles (United Nations/ECE, EEC) and aircraft engines (ICAO)		
Bilateral programmes for transboundary air pollution research in Europe, North America.		
NGO networks for public information and "auditing"		

CONSIDERATIONS

As an alternative to the "globalizing" of existing regional instruments (such as the LRTAP Convention and its EMEP monitoring/modelling programme), it may be preferable to facilitate new regional agreements in other areas where suitable intergovernmental institutions are available for negotiation and implementation.

In addition to promoting new control technologies for air pollution abatement, there is urgent need to focus on new strategies for energy efficiency and rational energy use, and to eliminate perverse economic incentives and subsidies for fossil fuels.

PROTECTION AND MANAGEMENT OF LAND RESOURCES BY COMBATING DEFORESTATION

(Working Group I)

SYNOPSIS

Forests - tropical, temperate and boreal - have varied benefits: they provide natural resources such as timber, fuelwood, fruits, medicinal plants and other materials; contribute to maintaining stability of the global and local ecosystems; contribute to regulating climate; provide environmental services such as soil protection and regulation of the water cycle; provide habitats for a variety of species. Particularly in tropical areas, forests harbour a high degree of biological diversity. In addition the forest has important cultural and social values, particularly to indigenous societies which derive their livelihood from it.

The degradation of forests throughout the world is increasing as a result of general mismanagement and by clearance of forests to create pasture and cropland, and by overharvesting of timber; cutting for fuel may also play a significant role in some regions. Particularly serious is the degradation that occurs on mountainous land. In industrialized regions air pollution and acid rain are significant contributors to forest degradation. There are arguments for removing forests to provide additional cropland to meet the demands of an increasing population. The argument is less convincing, however, when clearance exposes soil that is intrinsically of low fertility and cannot sustain agricultural yields for more than a few seasons. Timber extraction is an important economic activity; however, when not followed by replanting, it is not sustainable and has important environmental impacts.

It is increasingly recognized that forests can be managed in such a way that they respond optimally to the various needs of human populations, and at the same time protect the ecosystem and biological diversity.

OBJECTIVES

To derive optimal benefits from forest lands by sustainable use and by integration of woodland with other land uses, FAO, UNDP, the World Bank, UNEP, the regional economic commissions and other United Nations agencies play an important role in the area. Organizations such as ICIMOD and Alp Action also contribute.

Current activities	Results of current activities	Options for Conference action
Co-ordination of action in tropical forests takes place through TFAP, which mobilizes financial resources, integrates woodlands with other land uses, improves the economy and local employment (FAO, UNDP, IBRD).	Framework for elaboration of national plans for integrated, multisectoral approaches to forest conservation and use; independent evaluations of the performance of TFAP 1990 (FAO, WRI).	Strengthen the TFAP process and streamline its implementation; provide additional funds for institutional and human resource development and for projects.
Regional programmes on sustainable multipurpose management of tropical forestry in the Amazon and reforestation in Asian, Pacific and African regions (UNDP, FAO).		National Governments to evaluate forestry policies; improve strategies for sustainable use of forests; ensure livelihood of forest inhabitants; remove pervasive incentives that encourage deforestation; provide additional funding for conservation of critical forest ecosystems (through large-scale debt for nature swaps and other means); strengthen agro-forestry programmes; increase availability of seedlings; strengthen national and international forestry research.
Research, training, conservation and demonstration projects (UNEP, UNDP, World Bank, FAO, IFAD, UNESCO, UNIDO, Regional Economic Commissions, ICRAF and IUFRO).		
ITTO programmes to improve forests harvesting practices and trade.	A strengthened and expanded ITTO ensures sounder management of tropical timber resources.	
Monitoring and assessment of forest decline due to air pollution in temperate regions (United Nations/ECE and FAO).		

CONSIDERATIONS

The question of commmon property resources, the rights of indigenous and other populations which depend on the forest, issues of ownership and tenure.

Multiple use of the forest is an important factor in its protection and functioning.

Moving towards global net afforestation by the end of the century could be an important element in stabilizing climate change.

PROTECTION AND MANAGEMENT OF LAND RESOURCES BY COMBATING DESERTIFICATION AND LAND DEGRADATION

(Working Group I)

SYNOPSIS

Growing populations and economic activities are leading to general degradation of land and to desertification in various regions of the world, accompanied by periodic famines and endemic poverty, hunger and malnutrition. Inadequate practices for irrigation and fertilizer application in both industrial and subsistence agriculture; biomass removal for fuelwood, overgrazing, wind and water erosion and other phenomena all eventually degrade the soil and its capacity to provide sustainable yields. Erosion also contributes to siltation of rivers and reservoirs and destruction of coastal areas.

Decreasing productivity diminishes food security worldwide, creates poverty in rural areas and forces populations to abandon degraded lands and move to urban areas, thus intensifying problems there. On an international scale, land degradation may also contribute to the creation of environmental refugees.

OBJECTIVES

Promotion of food security and fiber, biomass energy and wood production through appropriate sustainable management actions; rehabilitation of damaged land resources. Activities in the fields of water, biological diversity, climate, eradication of poverty and others also help. Many agencies in the United Nations system have responsibilities, the main actors being UNEP, UNDP/UNSO, FAO, IFAD and UNESCO.

Current activities	Results of current activities	Options for Conference action
Information systems, including land degradation (UNSO, NGOs) and monitoring activities (GEMS).	Thematic maps of desertification world wide (1991); data and inventories of land, water, crop and livestock potentials, and pest management for sustainable land-use.	Enhance capabilities for research, monitoring and assessment. Expand early warning systems for drought.
Plan of Action to Combat Desertification (PACD); the World Soils Charter; the World Soils Policy; Interagency Working Group on Desertification Control; various activities on drylands (FAO, UNESCO, UNSO, UNEP, Governments).	Frameworks for action; national soil policies; evaluation of PACD 1972-1992 (UNEP).	Strengthen the implementation of PACD; mobilize resources; support action at the national level; address problems identified in the evaluation.
Activities directed towards rural development include the ACC Task Force on Rural Development; regional action programmes for rural development and agriculture in Africa, Latin America, Europe and the Near East (FAO); the Consultative Group on International Agricultural Research (CGIAR); the Programme of Action on Agrarian Reform; UNDP round tables.	Action programmes.	Develop improved crop/livestock/fallow rotation systems, blending traditional knowledge and modern understanding; enhance research on resource-poor low-input agriculture, particularly for arid and semi-arid regions.
Scientific studies and activities on an integrated ecosystem approach include work by MAB (UNESCO, ICSU/SCOPE).	Contribution to scientific understanding.	
World Conservation Strategy (UNEP, IUCN, FAO, UNESCO).	Framework for action.	Enhance implementation of strategies.

CONSIDERATIONS

Both high-input and low-input agricultural systems have negative environmental and social effects, are uneconomic in the long term and therefore unsustainable.

A major problem in dealing with desertification and land degradation is the lack of priority accorded by Governments to the issue, the inadequate provision for the mobilization of resources, the lack of support at the local level and fragmentation of activities.

Lack of funding is the primary constraint on progress.

CONSERVATION OF BIOLOGICAL DIVERSITY

(Working Group I)

SYNOPSIS

In spite of world-wide conservation efforts, the increasing loss of global biological diversity (genes, species and ecosystems) has continued. A quarter of the world's species may become extinct in a few decades, especially as a consequence of tropical deforestation. This threatens basic life functions and will impose economic costs through the loss of genes and species important in crop-breeding and medicine. It also raises ethical issues. The availability and use of biodiversity is essential to the promotion of development. Governments have adopted numerous measures to address different aspects of the problem, including national conservation programmes, international conventions and other instruments. These, however, are fragmented and poorly funded. There is no comprehensive international programme for the conservation and use of biological diversity as a component of sustainable development. This has contributed to the worsening of the situation.

OBJECTIVES

Conservation and sustainable use of biodiversity through the development of national and international mechanisms, and through increasing the knowledge base. FAO, UNEP, UNESCO, UNDP, the regional commissions and the World Bank are all concerned with conserving biodiversity. Global conservation organizations (notably, IUCN and WWF) and the World Resources Institute are also involved. The Ecosystems Conservation Group, (UNEP, FAO, UNESCO, IUCN, World Bank, IBPGR, WWF) co-ordinates United Nations activities in this field.

Current activities	Results of current activities	Options for Conference action
Biological diversity conservation via international conventions on wetlands (Ramsar), migratory species (Bonn), endangered species trade (CITES), whaling (IWC), antarctic marine living resources (CCAMLR).	Scheduling of international wetland sites and sites important for migrants; regulation of trade to protect endangered species; controls over fisheries exploitation; conservation laws and strategies.	Measures to improve support, coverage and harmonization of existing instruments and work.
International Undertaking on Genetic Resources (FAO); FAO action plans; IBPGR; CGIAR; BGCS; World Heritage Sites, Man and Biosphere Programme (UNESCO); IUCN and many NGOs.	Genotype & landrace conservation (crop, livestock breeding); FAO global action plans: plant and animal genetic resources (for 1991). Action plans for endangered species and groups. Botanic Gardens Conservation Strategy; Gene Bank Network.	
Preparation of World Conservation Strategy for the 1990s (IUCN, UNEP, WWF).	WCS-90s text to IUCN General Assembly (Nov. 1990).	Consider WCS-90s report in 1991.
Development of a new strategy for the conservation of biological diversity (WRI, IUCN, UNEP, UNESCO).	New strategy, includes systematic survey of centres of biological diversity, status reports on biological diversity, evaluation of causes of loss; minimal area protection required in future; encouragement of new conservation mechanisms.	Develop further arrangements for access to biological resources of potential genetic or other value, <u>in</u> and <u>ex situ</u>; develop funding mechanisms for conservation and use of biological diversity.

Current activities	Results of current activities	Options for Conference action
Review of Habitat Protection by the Fourth World Protected Areas Congress (IUCN) Venezuela, February 199. .	New decade action plan, including proposals for specific action at local, national and international levels.	
Development of a draft convention on the conservation of biological diversity (UNEP, FAO, IUCN, UNESCO).	Completion of a draft framework convention (end 1991); exploration of topics to be covered in subsequent protocols to that convention.	Consider early agreement on global framework convention leaving difficult issues for subsequent protocols, or longer negotiations leading to a more comprehensive instrument.
NGO's conduct public information campaigns for action, monitor loss of diversity; and evaluate effectiveness of governmental action.		

CONSIDERATIONS

Pressure on biological diversity, as with other environmental resources, stems in significant part from population growth, coupled with increasing consumption of resources. Strategies to conserve biological diversity need to take this into account.

All plans for conserving biological diversity must pay heed to the potential impact of global climate change, acting directly and through changes in land-use patterns. The world will need biodiversity as an essential resource to adapt to such changes.

ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY

(Working Group I)

SYNOPSIS

Biotechnology is rapidly emerging as a technique capable of conferring tremendous benefits on humanity: increasing food production; reducing dependence on artificial fertilizers and pesticides; improving health by creating and mass-producing new drugs, antibiotics, hormones and by advances in gene therapy; increasing industrial capacity via micro-organisms which can concentrate low-grade mineral ores (beneficiation), or which can create new pathways for product synthesis and breakdown of harmful wastes. Gene insertion is an important component of biotechnology. The attendant risks for potential harm posed by the inserted genetic material escaping uncontrollably into wild organisms by gene transfer processes that occur naturally in the environment need evaluation before any project on genetic engineering is begun. The socio-economic and environmental benefits and risks need prior evaluation in every instance. At present, the specialized technology, skilled manpower and development capital required for progress are almost wholly in the private sector in the industrialized countries, whereas the enormous richness of biological species and hence the huge genetic diversity required for success is largely found in the developing countries. This could lead to exploitation of the natural resources of developing countries in ways which are not in their best interests and serve only to widen the development gap between North and South. In particular, biotechnology could erode the livelihood basis of traditional producers by the development of substitute products and processes from genetic material taken from those very countries.

OBJECTIVES

The United Nations system has not had enough time to develop any clearly recognizable "track record" on biotechnology because of its newness. However, many agencies are starting work in the various issues relating to their responsibilities in environment, agriculture, food processing and safety, health and industry by following biotechnology developments in the private sector and activities related to the field-testing and release of genetically modified organisms. Other objectives are related to specialist training, technical assistance, supporting research and disseminating information.

Current activities	Results of current activities	Options for Conference action
National microbiological resource centres, linked to global network (UNEP/UNESCO); World Data Centre on Micro-organisms and the International Microbial Strain Data Network (UNEP etc.).	Networks for crop and livestock improvement; vaccines. Planned global data base(s) on environmental impacts of all releases of genetically modified organisms.	Support and expand activities of national microbiological resource centres. Support data banks on biological strains of organisms relevant to genetically modified organisms, their release and environmental impact.
Assistance to developing countries through the International Center for Genetic Engineering and Biotechnology, and Tropical Centre for Industrial Environmental Microbiology (UNIDO); Biotechnology for food products and processing (FAO). Patent rights to genetically modified organisms (WIPO).	Inventory of existing regulation governing field-testing and uncontrolled application of biotechnology products. Harmonized guidelines for good environmental practices of biotechnology.	
Preparation of code of conduct for biotechnology as it affects conservation and use of plant genetic resources (FAO).		Extend the present status of international agreements relating to biosafety and support development of an international service on biosafety. International convention on ownership of indigenous germplasm as a protection for developing countries.

CONSIDERATIONS

Biotechnology development should reduce - not enhance - environmental risk.

The livelihood base of traditional producers has to be protected.

The technological gap between the industrialized and the developing countries has to be narrowed.

PROTECTION OF THE OCEANS AND OF COASTAL AREAS

(Working Group II)

SYNOPSIS

The capability of the oceans to support living matter and human uses, especially in near-shore areas, is jeopardized by the destruction of vulnerable sites and by pollutants entering the seas from a variety of land-based and maritime sources. The main cause is the growing concentration of human populations and activities (urban, recreational, agricultural, industrial) in the coastal areas and increase of transportation and other activities in the open seas.

Co-operative international research, monitoring and assessment activities have accelerated significantly in recent years due in large part to well-co-ordinated international programmes such as the United Nations Group of Experts on Scientific Aspects of Marine Pollution. Maritime sources of pollution are managed and controlled through a variety of international agreements such as the Treaty on the Law of the Sea, the London Dumping Convention, MARPOL Convention and others.

Concern is now shifting to coastal areas and to improving management of development, reducing harmful impacts and encouraging economic growth. A few international agreements are, in effect, calling for the protection of wetlands and other areas of high value, but coverage is far from complete, with significant gaps especially evident in developing countries. Although protection of the oceans is a global problem, the most effective approach has been at the regional level where agreements among some 120 coastal States sharing common problems have provided the basis for significant improvements.

OBJECTIVES

To assist countries in activities needed to manage coastal development in ways that reduce harmful impacts; restore the biological productivity of marine biota in near-shore areas; protect endangered species and areas important as habitats for species of commercial or other importance or other beneficial uses; provide better early-warning of natural and anthropogenic disturbances (including possible sea-level rise whether due to land subsidence or climate change, or both); and improve the ability of coastal communities to cope with such difficulties. Many United Nations agencies are involved, but the main responsibilities lie with UNEP, through its Regional Seas Programme, IMO and UNESCO/IOC.

Current activities	Results of current activities	Options for Conference action
Global-scale assessment activities include Global Investigation of Pollution in the Marine Environment (UNESCO/IOC) and related programmes which study marine pollutants; risks from storms; possible climate changes; and other factors for coastal/marine protection and management.	Basic data and information on the state of the marine environment; assessments used for local planning and coastal zone management.	Accelerate work on monitoring assessment; expand to include impact of climate change on socio-economic activities; identify policy options; recommend action to address global-scale issues.
Global legal régimes address land-based activities, radioactive wastes, driftnet fishing, sea-bed exploration and exploitation, accident-prevention schemes, improved tanker design, emergency response capabilities, with supporting training and technical assistance.	Legal provisions for action in various areas.	Expand ratification of treaties, ensuring their adaptation to changing conditions and needs; negotiate new agreements for emerging problems (e.g., driftnet fishing).
Regional activities include assessments, legal agreements, management activities carried out collectively by Governments; activities vary according to existing regional action plans.	Regional plans for all significant regions, with first priority on those facing more serious problems.	Identify additional resources; agree on accelerating and adding to existing action.

CONSIDERATIONS

Insufficient human, institutional and financial resources in many regions slow effective implementation of programmes.

The development community could contribute to improving coastal zone planning and management and implementation of programmes.

More credible assessments are needed to assist in mobilizing support.

RATIONAL USE OF MARINE LIVING RESOURCES

(Working Group II)

SYNOPSIS

The oceans sustain a wide variety of living resources, both animal and vegetal. These resources form the basis of important economic activities and contribute in many ways to human development and food supplies. However, they are increasingly coming under threat. The overriding cause is the growing concentration of investments, economic activities and population along coastal areas as well as increased activities in the exclusive economic zones and high seas.

Pollution, siltation and indiscriminate development of sensitive areas lead to destruction of habitats and a general degradation of the coastal and marine ecosystems. Open access to fisheries leads to overharvesting and results in a reduction of stocks, species and general biodiversity. Incidental catches also contribute.

This state of affairs has important impacts on society by reducing the livelihoods of both artisanal and industrial fishermen.

OBJECTIVES

The specific objectives concerning marine living resources include the protection, rehabilitation and management of ecosystems and habitats; the protection, management and sustainable use of living resources. Actions under marine and coastal areas and biodiversity contribute to the rational use of marine living resources. The main responsibility within the United Nations system in this area lies with FAO, but many others also contribute, including UNEP, UNESCO/IOC and IWC.

Current activities	Results of current activities	Options for Conference action
General programmes on the rational use and management of marine living resources, especially fisheries (FAO, IFAD, UNESCO/IOC, UNDP, regional bodies); strategy for fisheries management and development (FAO); work on General Assembly resolution 44/225 on driftnet fishing (UNCLOS), and review of the situation (UNEP, FAO, IWC).	Strategies; guidelines for management; control measures; action programmes; possible suggestions for management régimes.	Enhance co-ordination between agencies and programmes. Promote integrated management and sustainable use of all marine living resources and ecosystems. Promote and enhance legal and regulatory measures.
Protection of species and ecosystems include Global Plan of Action for Marine Mammals (FAO, UNEP, IWC, IUCN and others); Protection of Antartic Marine Living Resources (CCAMLR); International Whaling Convention; and others.	Frameworks for action; guidelines; legal agreements; regulations; programmes.	Improve technology, particularly for fisheries and aquaculture.

CONSIDERATIONS

The main problem in this area is the excessive fragmentation of approaches and responsibilities and not considering all marine living resources in a comprehensive manner. National and international management régimes, regulations and legal instruments also need to be harmonized.

A major issue is the question of responsibility for the management of the high seas.

The use of environmental regulations as a trade barrier is a serious problem for developing countries.

Wastage in both the fishing and processing stages is a major contributor to reduction of stocks.

Non-governmental organizations can make an important contribution to the protection and rational use of marine living resources.

The possible impact of climatic change on marine living resources and their habitats is an important emerging issue.

PROTECTION OF THE SUPPLY AND QUALITY OF FRESH-WATER RESOURCES

(Working Group II)

SYNOPSIS

Water is a basic necessity for life, and it is also essential for economic activities. Yet practically every country faces problems of water supply or quality which increasingly constrain social and economic development. Water is the most widely used resource of the earth; a source of floods and drought; the principal determinant of both global biogeochemical cycles and the integrity of river/lake basins; water is a life-supporting media for aquatic living resources which are important sources of food.

The main concerns in this area are increasing demand for water, particularly due to growing populations, which cannot be met with the resources available; water resource development projects which inevitably bring environmental consequences; development of river/lake basins which lead to watershed degradation; activities in the upper parts of river/lake basins which are often implemented without proper regard to water demand and quality downstream. In many developing countries there is not enough safe drinking water and proper sanitation. Poorly co-ordinated management of international rivers, aquifers or lakes is a major potential source of conflicts and a threat to security.

OBJECTIVES

To assist countries in the management of fresh-water resources as an integrated component of environmentally sound and sustainable development. The overall framework for global action has been the Mar del Plata Action Plan resulting from the 1977 United Nations Water Conference. The Plan resulted in the International Decade for Water Supply and Sanitation (1981-1990), which is just coming to an end. At the United Nations level the ACC Inter-Secretariat Group on Water Resources has been co-ordinating United Nations responses.

Current activities	Results of current activities	Options for Conference action
Implementation of the Mar del Plata Action Plan (UNESCO, WHO, WMO, UNEP, FAO, WB, UNDP etc.).	Report to the March 1991 Inter-agency Committee on Natural Resources: new strategy for the 1990s.	Consider co-ordination of cross-sectoral issues (legal, institutional, financial etc.) for the implementation of the Mar del Plata Action Plan.
Review and evaluation of the International Drinking Water Supply and Sanitation Decade (Steering Committee - WHO, UNDP and World Bank).	Follow-up strategy to the International Drinking Water Supply and Sanitation Decade.	Review the International Drinking Water Supply and Sanitation Decade and recommend ways and means to achieve further results.
International conference on water and the environment (early 1992). WMO on behalf of ISGWR, to update and enhance international action.	New strategy/action plan for the 1990s and beyond.	Accelerate date of conference; co-ordinate the agenda in terms of cross-sectoral objectives.
Global, regional and basin-level legal instruments and standards are being developed mainly by the International Law Commission, international river/lake commissions and bilateral arrangements (WHO, United Nations/ECE, UNEP).	ILC draft articles on the law of non-navigational uses of international watercourses (1991/92); United Nations/ECE draft conventions (1990/91).	Extension to other suitable regions and/or water basins.

CONSIDERATIONS

Although some success has been achieved, due to various factors (population growth, environmental constraints), the goals of the Mar del Plata Action Plan and the International Drinking Water Supply and Sanitation Decade have not been fully met. Issues of water demand, supply and quality have to be considered together and be integrated into international and national sustainable development strategies.

Population growth and the consequent increase of water demand (particularly for irrigation) must be seriously considered. A set of measures (economic, legal, institutional etc.) could be introduced to achieve better efficiency of water use.

Land and water management should be considered together.

In financing water resources development, a proper balance should be established between the quality and quantity issues.

In planning for sustainable development the impacts of climate change on quantity, stability and quality of water resources should be considered.

ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS

(Working Group II)

SYNOPSIS

Chemicals play a crucial role in all development sectors. They are used widely, for example, in industry, agriculture and in the protection of public health. However, if appropriate management measures are not taken during their manufacture, storage, transportation and disposal, toxic chemicals can cause significant health and environmental problems, accumulating in soils and going through the food-chain. Some of these problems have global consequences. The misuse of chemicals can also have impacts on human health. Industry is increasingly responding to the awareness and concerns of the public by providing more product information on the safe use of chemicals and intensifying research and development efforts to produce products that are safer and less harmful to the environment. Governments are strengthening appropriate institutions and the judicious application of regulations, legislation and incentives. Special attention should be given to an integrated approach for managing toxic chemicals. Reductions in the quantity of toxic chemicals used will result in a corresponding reduction in the amount of hazardous wastes generated.

OBJECTIVES

To maximize the many benefits that chemicals can provide while reducing adverse impacts on human health and the environment.

Current activities	Results of current activities	Options for Conference action
London guidelines for the exchange of information on chemicals in international trade (UNEP); development and dissemination of lists of chemicals banned and severely restricted by more than 10 countries (UNEP/FAO).	Guidelines implemented. The principles of the prior informed consent system internationally agreed upon and implemented.	Elaboration of framework (umbrella) convention on the management of chemicals; support and encourage greater use of the London guidelines. Development of a prior informed consent convention; support implementation of list. Development training programmes for developing countries.
International Programme on Chemical Safety; new activities to develop risk assessment methods relating to chemical exposures (WHO/ILO/UNEP); Code of conduct on the use of and disposal of pesticides (FAO); work on IPM (FAO, UNDP, UNEP, CEIR).	Monographs outlining scientific principles for ecological risk assessment; recommendations on research needs in ecotoxicology; harmonized test methods to produce internationally comparable results.	Strengthen UNEP/IRPTC; Support IPCS; Increase support for IPM; promote national regulation on management of chemicals and pesticides in developing countries; develop new structure for appropriate management of toxic chemicals and pesticides; strengthen national institutions.
Proposed convention concerning safety in the use of chemicals at work, to reduce the incidence of chemically induced illnesses and injuries (ILO).	Convention and recommendations on chemical hazards evaluation; providing information to workers; preventive measures and programmes.	Support convention. Transform recommendations into protocols.
Programme on new chemicals and co-operative investigation of existing chemicals, including investigation of high production volume chemicals, existing chemicals data base; clearing house and follow-up activities (OECD).	Collaborative investigation of hundreds of chemicals of mutual concern to OECD member States.	Recommend acceleration of work. Extension of OECD work to other regions. (Good laboratory practice, mutual acceptance of data, test guidelines, minimum pre-market set of data, work on new and existing chemicals).
Pesticides Action Network, operated internationally by a coalition of non-governmental organizations.	Increased public awareness on the consequences of using banned and severely restricted chemicals; promotion of control and legislative actions.	Endorse work of NGOs to increase public awareness.

CONSIDERATIONS

Existing systems and protocols for testing chemicals cannot catch up with the backlog of chemicals in use or keep up with the number of new chemicals that are introduced. Testing costs are increasing, making it difficult for developing countries to carry them out.

Major issues include promotion of concepts and approaches from single chemical testing to other approaches, such as "critical load régime"; "cradle to grave" responsibilities for toxic chemicals, similar to the concept used for hazardous wastes; harmonization of procedures for transport of dangerous substances; international labelling systems for toxic chemicals.

Incentives need to be increased to explore and develop alternative methods to use toxic chemicals, such as integrated pest management and organic farming; the use of "clean" technologies and recycling and utilization of residues, to promote sustainable forms of development.

ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTE

(Working Group II)

SYNOPSIS

With the increasing use of toxic chemicals in industry, intensive agriculture and urban development, the quantity of hazardous wastes is also increasing. However, very few countries can effectively manage hazardous wastes. Inappropriate storage, transport and disposal of hazardous wastes have very serious health and environmental consequences, with potential effects lasting over a long period. Furthermore, illegal international traffic in toxic and dangerous products and wastes is increasing. Hazardous waste reduction and disposal at source is a principle generally subscribed to. Governments and industry are increasingly establishing policies and/or incentives to minimize the generation of hazardous wastes, but because of the magnitude of the problem, more needs to be done.

OBJECTIVES

To support policies to minimize generation and improve environmentally sound management of hazardous waste to promote sustainable development. Various United Nations agencies have activities in this area.

Current activities	Results of current activities	Options for Conference action
Work related to implementation of Basel Convention for control of transboundary movements of hazardous wastes and their disposal (UNEP).	Ratification by four countries (20 ratifications needed). Starting work on a set of protocols.	Strengthen Basel Convention; extend implementation to other regions. Adopt protocol on liability and compensation for damage resulting from movement of hazardous wastes.
Work related to reducing amount of hazardous waste and development of code of practices (OECD).	Clearing house for clean industrial technologies.	Strengthen national legislation for the control and management of hazardous wastes.
Programmes to promote the application of clean technologies, recycling, source reduction (UNIDO, UNEP, United Nations/ECE).		Establish effective monitoring in all regions.
Code of practice concerning nuclear wastes (IAEA).		"Clearing house" systems for clean technology; programmes to train new managers and workers.
Convention to protect workers from hazardous substances (ILO).		An "auditing" system, including accounting at corporate level.
European Convention on the carriage of dangerous goods by road; annex on hazardous wastes (United Nations/ECE).		Agree on world-wide hazardous waste management strategy.

CONSIDERATIONS

Lack of awareness of the environment and health impacts of poor management of hazardous waste.

Lack of reliable information on the generation of waste (particularly hazardous wastes); identification of illegal dumping sites and clean-up programme.

Lack of monitoring and control on transfrontier movement of waste (particularly hazardous wastes), possible new initiative to monitor and control the movement of hazardous waste (including the use of new satellite technologies).

Lack of appropriate legislation on the management of waste (particularly hazardous waste in developing countries).

Necessity of new economic instruments and policies on incentives.

Accelerate development of new technologies/transfer of technologies for the management and treatment of hazardous waste.

Inadequate financing, human skills and institutional capacity.

IMPROVEMENT OF THE LIVING AND WORKING ENVIRONMENT OF THE POOR

SYNOPSIS

Poverty and general deterioration of the human and natural environment are inextricably linked. People are caught up in a vicious circle of limited access to productive livelihoods and resources which forces them to exploit marginal environments. This in turn causes environmental deterioration and a very poor quality of life, where basic needs for food, shelter and health are not met. Growing populations in rural areas are forced to migrate to cities, thus aggravating the problems of urban areas. Cities not only offer unacceptable living and working conditions to a large part of the people living there but, in many cases, also have a negative impact on the surrounding environment. Thus, settlements are an important element in the interphase between environment and development, and deterioration in one sphere causes deterioration in the other. Likewise, action in one area can improve conditions in the other.

OBJECTIVES

To alleviate poverty, by increasing income-generating activities and by improving the living and working environment for the poor in urban and rural areas. Activities in various other fields dealing with food, water etc. help alleviate poverty. Most United Nations agencies have programmes to improve the living and working environment of the poor.

Current activities	Results of current activities	Options for Conference action
Activities dealing with the living environment include regional planning for human settlements (United Nations/ECE); Global Strategy for Shelter to the Year 2000 (UNCHS); Urban Management Programme (UNCHS, UNDP, World Bank); Healthy Cities Project (WHO, ECE); Metropolitan Environmental Improvement Project (UNDP); ecological approaches to urban planning and management (MAB, UNESCO).	Conference on Planning for Sustainable Human Settlements Development (1992); policy framework to improve conditions for the poor through preventive and remedial strategies; ecological approaches to planning; measures and guidelines for implementation.	Improve co-ordination within the United Nations system for the entire issue of eradication of poverty, improvement of the living and working environment, and settlements; accelerate support for implementation; consider improvement of financial mechanisms.
Activities dealing with the working environment include the World Employment Programme and the Programme for Improvement of Working Conditions and Environment.	Promotion of employment, income generation and improved environment.	Increase support and action.
Programmes for rural development and eradication of poverty include programmes for food production (FAO, IFAD, WFP); Cairo Programme for African Co-operation, AMCEN (UNEP), and for Latin America (UNEP, ILO, DTCD); Expert Consultation on Environmental Health Principles for Rural Development (WHO, 1993).	Satisfaction of food needs, alleviation of poverty. Principles and guidelines for rural development.	Increase funding and support.
NGO actions include the Habitat International Coalition (HIC).	Co-ordination of NGO policies.	Involve NGOs fully in implementation; increase funding for their programmes.

CONSIDERATIONS

The major challenge is to harmonize the needs of the poor and the destitute today, with the long-term requirements of a sustainable world in the face of population increases. Improved livelihoods and access to resources while protecting the environment are therefore major goals.

Co-ordination within the United Nations system needs to be strengthened. Funding and action need to be increased to reflect the priority accorded to the issue.

National policies and actions would also benefit from better co-ordination and strengthening.

NGOs could be used as a means of implementing more effective and efficient community-level projects.

PROTECTION OF HUMAN HEALTH CONDITIONS AND IMPROVEMENT OF THE QUALITY OF LIFE

SYNOPSIS

Health is a basic human need and an integral part of the quality of life. The relationship between health and sustainable development is reciprocal: health depends on the wise use of resources to satisfy needs such as food, water and shelter, while development itself depends on healthy and productive people. In pursuing health, Governments and society have traditionally paid attention to disease and its prevention and control. The perception now is that health must be viewed in a positive and pro-active sense, striving to develop human being's potential to the fullest extent. Thus health requires not only the control of diseases but also the provision of a healthy and supportive environment. Health is a pervasive, cross-sectoral issue, linked closely to many areas of environmental concern, such as water, air quality, and others. Health, therefore, has to be considered when dealing with those areas. Only those issues of broader environmental significance will be dealt with here.

OBJECTIVES

Ensure that basic health needs for all are met; protect the health of specific population groups (children, mothers, elderly); prevent and control environment-related diseases, and protect against health risks originating in the development process itself. There are no formal co-ordinating mechanisms within the United Nations system but many agencies, including WHO, UNEP, ILO, UNCHS, UNDP, FAO, IFAD, UNIDO, UNICEF, UNFPA, World Bank and others, collaborate on specific activities. The main responsibility rests with WHO.

Current activities	Results of current activities	Options for Conference action
Major work on broad health, environment and development, relationships include Health and Sustainable Development report (WHO) 1989; Human Development Report, UNDP 1990; WHO Commission on Health and Environment; First European Conference on Environment and Health (Dec. 1989) activities.	Analysis of conceptual and operations linkages between health, environment and development; setting of priorities and formulation of strategies for health and human development; European Charter on Environment and Health.	Develop a comprehensive policy framework and strategy for health, environment and development and the improvement of the quality of life; develop a global charter on environment and health.
Programmes on basic health needs; drinking water supply and sanitation, shelter; endemic diseases; effects of industrial development and others. Major activities include Third International Conference on Health Promotion, June 1991, and International Conference on Nutrition, 1992/93.	Programmes dealing with different aspects of health and environment. Strategies that highlight supportive environments for health.	Incorporate activities in a comprehensive framework.
Information-gathering and monitoring includes GEMS health related monitoring of urban air contamination and human exposure (UNEP, WHO, UNESCO, FAO, WMO).	Basic health and environment data.	Strengthen and expand monitoring and assessment of environmental conditions important to health and the health burden of these.
Major work on additives, chemicals, radioactive materials in various media; vector and pest control (WHO, FAO, UNEP, IFAD, IAEA, UNDP).	Agreed standards, procedures and management methods.	World-wide harmonization of health related standards; step up adoption of standards; possibly develop a "codex chemicalis" in line with the Codex Alimentarius.

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CONSIDERATIONS

The major gap in this area is the insufficient integration, at both the national and international levels, between health, development and environment policy, institutions and activities.

Insufficient information, monitoring, assessment and evaluation of the impacts of development actions and hazards on health.

Annex II

CROSS-SECTORAL ISSUES

In resolution 44/228 the General Assembly specifies the issues to be covered and the objectives to be achieved at the 1992 Conference. The objectives are essentially cross-sectoral in character. The interaction between environment and development is a general feature which underlies the approach to the sectoral as well as the cross-sectoral issues. The more specific cross-sectoral issues identified by the General Assembly and the Preparatory Committee are funding arrangements, technology transfer, legal instruments, institutional issues, the use of economic instruments and supporting measures. Some considerations relevant to each of these areas are given below. The note under each area heading refers to the section and paragraphs in resolution 44/228.

I. FINANCIAL RESOURCES

(Sect. I, para. 15 (i), (k), (l), (v))

1. Financial resources required at the international level to finance the actions which the Preparatory Committee may recommend for consideration by the Conference fall into two broad categories:

1.1 Those funds required to finance international programmes and activities of an explicitly environmental nature, including in particular the funds which may be required by developing countries to support their participation in such activities. These would include monitoring, assessment, research and the processes of negotiating, administering and implementing environmental conventions and treaties; and

1.2 The much larger amounts of funding required to enable developing countries to meet the additional costs of incorporating the environmental dimension into their development policies and practices and enhancing development spending in initial areas. A distinction needs also to be made in these costs between those which relate to actions taken by developing countries primarily as a result of internationally agreed measures for reducing or ameliorating global risks, e.g. climate change and ozone depletion and those funds required to meet other development priorities of a primarily national character.

An important dimension of the issue is burden-sharing when the causes and/or effects of environmental problems or resource degradation are essentially transnational in character. The developing countries, in particular, lack the resources for the preventive and adaptive measures required to cope with certain global problems that have arisen largely due to patterns of production and consumption in more industrialized countries.

2. An important factor in determining how these financing needs may best be met will be the production of credible estimates of such needs.

2.1 In the case of international programmes and activities of an explicitly environmental character it should be possible to make such estimates on a reasonably reliable basis although in only a few instances has this actually been done to date. In respect of existing activities such as those of the United Nations system reported in the overview document, no cost figures are provided, since most of these activities are being undertaken as parts of ongoing programmes and it would have taken more time than was available to separate out of these the costs directly applicable to activities relevant to the 1992 Conference.

2.2 In respect of the costs to developing countries of incorporating the environmental dimension into their development policies and practices, a great deal of work remains to be done. This is handicapped by the lack of well-developed and accepted methodologies in this area. Defining these costs in more specific terms on an issue-by-issue basis will require evaluation of the degree to which such costs can be absorbed within currently available funding arrangements and the extent to which they can be reasonably considered "additional" to the costs which would otherwise have been incurred by these countries in respect of the relevant development activities. An important example in this respect is provided by the estimates developed by UNEP as to the additional costs to developing countries of meeting internationally agreed targets for phasing out the use and production of chlorofluorocarbons.

3. In considering costs of international environmental activities and environment-related development it would also be important to consider the costs, in economic as well as environmental terms, of not undertaking, or deferring, such activities. While these costs do not readily lend themselves to definitive quantification, they are nevertheless very real. Accordingly, analyses of costs and benefits of various proposed actions, and non-actions or deferred action, would be an invaluable aid to decision-making, particularly in those areas where costs and/or risks may be greatest.

4. It may be helpful in considering the best means of meeting the financing needs to which such costs would give rise to distinguish between the sourcing of the required funds and the dispensing of such funds.

4.1 To date Governments have been the source of most such funds whether they are provided through their assessed contributions to the budgets of the United Nations and its agencies and organizations or through voluntary contributions largely from official development assistance, to a wide variety of specific programmes and activities, and in some cases pursuant to obligations assumed under international agreements. The current efforts of the World Bank, in co-operation with UNDP and UNEP, to obtain voluntary contributions to a new global environmental facility and the efforts of UNEP to obtain agreement pursuant to the Montreal Protocol to finance the additional costs which developing countries would incur in implementing its provisions for phasing out of chlorofluorocarbons are based on securing governmental funding that is likely to come from official development assistance. In light of the multiplicity of new funding needs that is likely to arise in future and the probability that these will exceed funds available through traditional development assistance sources, it may be timely and useful "to examine the possibility of a special international fund and other innovative approaches" as indicated in General Assembly resolution 44/228, paragraph 15 (1), including the

possibility of obtaining such funds from sources other than appropriations from annual national budgets - e.g., through levies, user fees or similar charges which internalize environmental costs to the products or services which give rise to them.

4.2 In the dispensing of such funds, whether they come from traditional or new sources, decisions will have to be taken as to whether they are dispensed through a single new international fund, or through existing funding institutions and/or new financing mechanisms established specifically in respect of particular issues - as, for example, the Montreal Protocol. Proposals have been made for the establishment of general funding arrangements for environmental technologies and related areas* and for a global climate fund** which have received considerable attention but are not yet the subject of specific negotiations within the international community.

5. Private investment and the provision of special incentives for investment in projects, programmes and processes which contribute to environmentally sustainable development provide an extremely important potential source of financial resources and measures required to stimulate these flows, including public/private partnerships, will need to be considered.

6. In addition to official and private flows of financial resources, there are a number of innovative approaches to indirect methods of increasing the financial resources available to developing countries through measures, such as tradable emission permits, which could be considered. Measures for reducing developing country debt can also be regarded as an important potential funding source.

7. In establishing new and additional financial resources and mechanisms to meet environment-related needs, it is important that the financing does not distort fundamental development priorities, but rather these resources compliment and supplement those for development. Just as the goal of sustainable development is to achieve the full integration of environment into the development process, it will be important to consider how the provision of the additional financing required for this purpose is linked with the processes and mechanisms for development financing without distorting developing country priorities. Related to this is the need to consider measures for improving the credibility of and confidence in the effectiveness of existing development funding mechanisms and processes and to avoid imposition of new forms of conditionality.

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* Proposed by Prime Minister Rajiv Gandhi of India in 1989.

** Proposed by the Minister of Environment of the Netherlands at the Conference on Climate Change, held in Toronto, Canada, in 1989 and subsequently subject of a major study undertaken by McKinsey and Company.

II. TECHNOLOGY TRANSFER

(Sect. I, para. 15 (1), (m))

1. Industry, research establishments and academia are fora where transfer of technology and know-how occurs. While some technologies can be acquired at low or no cost, others have to be purchased. There are two basic elements contained in the concept of technology transfer: access to and use of patents and intellectual propoerties; and access to and use of know-how related to the technology and its use. In the development and implementation of a régime for technology transfer, barriers that impede or prevent transfer need to be lowered and, wherever possible, eliminated.

2. The importance of technology transfer in promoting sustainable development requires action on two emerging fronts. These are:

2.1 Increasing co-operation and internationalization of basic research and countering the limits on such exchanges by perceived commercial or strategic benefits; and

2.2 Improving universal access to environmental technologies that serve public interests.

3. The specific considerations that require attention in this area:

3.1 Financial and institutional mechanisms for facilitating transfer of environment-friendly technologies;

3.2 The resolution of issues relating to intellectual property rights, compulsory licensing etc., so as to ensure that all countries have equal access to the relevant technology;

3.3 Assisting developing countries to develop human resources for technology assessment, generation, adaptation and utilization;

3.4 The identification and development of indigenous technologies that can promote sustainable development.

III. LEGAL ASPECTS

(Sect. I, para. 15 (d))

There are four main categories of legal aspects to be addressed by the Conference:

1. Formulation of general principles ("general rights and obligations of States", and "environmental rights and obligations" of individuals, groups and organizations, according to the Bergen Ministerial Declaration, section 16/g);

2. Adoption or endorsement of sectoral legal instruments referred to at the Conference (such as the proposed draft convention on climate change);

3. Proposals for legal/institutional innovation in the United Nations system (with regard to decision-making on environment/development matters, overview of performance, possibly dispute settlement); and

4. Identification of legal support measures needed to carry out specific sectoral or cross-sectoral programme objectives (e.g., regarding intellectual property rights for environmental technology; technical assistance for national implementation of international instruments).

5. Possible considerations by the Conference include*:

5.1 International treaty or treaties, (framework convention/protocols) for signature by plenipotentiaries;

5.2 Declaratory statement, as potential basis for subsequent treaty-making and national legislation;

5.3 Legal elements of a future action agenda, specifying follow-up with regard to existing treaties and standard-setting régimes;

5.4 Recommendations for legal instruments of a non-mandatory nature (such as codes of conduct); and

5.5 Recommendations for institutional changes.

6. Implications for the preparatory process

The preparation of general principles and institutional proposals will require intergovernmental consultations preceded by expert advice.

Legal elements should not, however, be prepared in isolation from other action paths. When the Preparatory Committee establishes an open-ended working group (resolution 44/228, sect. V, para. 6), its work will have to be closely co-ordinated with the preparation of related sectoral and cross-sectoral elements. The extent to which this working group must interact with other parts of the preparatory process will need to be determined for each issue.

In the elaboration of general principles, the current emphasis on environmental rights should be balanced by due recognition of development rights.

Negotiations for new international instruments should take into account the innovative experience of recent environmental agreements (such as the Montreal

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* The overview document did not specifically address legal issues. The principal activities of organizations inside and outside the United Nations system in the field of environmental law were summarized in 1981 (In-depth Review of Environmental Law, UNEP Report No. 2, 274 pp.).

Protocol; the Sofia Protocol and Declaration; the EEC Directive on Large Combustion Sources), with a view to facilitating progressive strengthening of national commitments (upward mobility), and dynamic adjustment to changing circumstances (flexibility).

The capacity of developing countries to participate fully in the negotiation of agreements and in their implementation is essential to the process and needs support.

There are important gaps in current international environmental law, especially as regards international trade - both in environmentally hazardous products (where current régimes of mutual recognition of national licensing may no longer be adequate) and in environmentally beneficial products (where international harmonization of national "green labels" is overdue).

In some instances, as an alternative to "globalizing" the geographical scope of existing regional agreements, it may be more appropriate to promote the establishment of similar agreements in other regions, especially where suitable intergovernmental institutions are available.

More attention should be given to innovative methods of inducing compliance with international agreements, including (i) periodic performance reviews on the basis of national reports (public "auditing"); (ii) procedures to follow up on complaints of non-compliance (through an intergovernmental complaints procedure as developed under the Montreal Protocol, or by way of infringement proceedings as developed under the EEC Treaty); and (iii) alternative forms of dispute settlement (either through better use of available local remedies, by granting foreigners equal rights of access to national judicial and administrative proceedings; or by reference to a competent intergovernmental body for fact-finding and mediation).

Public information on international environmental agreements should be stepped up in order to promote their wider acceptance.

IV. INSTITUTIONS

(Sect. I, para. 15 (h), (o), (q), (r), (t), (u), (v))

On the theory that "form follows function", the Preparatory Committee will undoubtedly wish to make its recommendations in respect of institutional matters only after, and in light of, its consideration of the substantive actions and related financial, technology transfer, legal and other supporting measures. Nevertheless, at this point it may be useful to identify the principal areas in which such institutional issues are likely to emerge and to consider the framework and the timetable for their consideration by the Preparatory Committee. Such areas might include:

1. Environment, specifically those functions of an explicitly environmental nature for which, within the United Nations system, UNEP has principal responsibility. These responsibilities, as assigned by Governments after the 1972 United Nations Conference on the Human Environment, consist of "assessment",

"management" and "support" responsibilities. Related to this are the environment-related responsibilities and activities of other agencies, organizations and programmes of the United Nations system and a wide range of intergovernmental, governmental and non-governmental activities.

2. Integration of the environmental dimension into the mandates and activities of the large number of organizations responsible for and involved in development at the levels of economic and sectoral policies, planning and implementation, with particular reference to the agencies, organizations and programmes of the United Nations system.

3. Overview of the series of systemic, interacting relationships between environment and related economic, social, humanitarian and security concerns and exercise of the policy-level integrating and co-ordinating functions required to deal effectively with these relationships. Some ideas have already been put forward in this area including the possibility of establishing a form of "environmental security council", utilizing the Trusteeship Council for this purpose and using the Security Council to deal with the security aspects of these relationships.

4. Implications for the preparatory process

4.1 While the institutional issues to be considered by the Conference will focus primarily on the areas in which decisions must be taken at the international level and will therefore pertain primarily to multilateral institutional arrangements, it must be borne in mind that the purpose of such arrangements is to serve and support the institutions and interests of member States. It is at the national level where the principal policy decisions, and measures for their implementation, in respect of environment and development issues are taken and international institutions and mechanisms are designed primarily to facilitate consultation and co-operation in respect of the increasing number of issues which cannot be dealt with adequately or effectively at the national level alone. Thus, decisions to be taken in respect of institutional arrangements at the international level must be rooted in and carefully attuned to the related institutional arrangements and requirements at the national level. The need to integrate environment and development at all levels of policy and decision-making is also recommended in the report of the World Commission on Environment and Development.

4.2 Strengthening institutional capacities does not necessarily require establishment of wholly new institutions. Perhaps the greatest requirement is for the development of more effective processes and means for enabling existing institutions to collaborate more closely and effectively in dealing with environment and development issues, which by their nature are complex and interacting, and extend into areas which invoke the mandates and the capacities of several, and in some instances many, separate institutions. This is likely to require changes within the individual institutions concerned as well as the development of much more effective mechanisms for collaboration and co-ordination than now exist. This is an area in which the Conference may make an especially important contribution to the strengthening of the international institutional system.

4.3 There is a need to consider the institutional implications and needs in respect of the growing role of non-governmental organizations whose work is, to varying degrees, closely integrated with and through international governmental organizations - e.g., the role of ICSU together with WMO and UNEP in support of the Second World Climate Conference.

4.4 The report being prepared by UNEP on the structure and responsiveness of the United Nations to deal with major environmental issues as requested by the General Assembly in resolution 44/229, paragraph 5, will provide an important contribution to the preparatory process. A study on institutional options of management of the global environment and commons, being carried out under the auspices of the World Federation of United Nations Associations, should also make a useful contribution.

V. ECONOMIC INSTRUMENTS

(Sect. I, paras. 4-6, 9, 11, 3 and 15 (b), (c), (e)-(i))

1. The use of economic instruments and measures in conjunction with appropriate regulatory approaches can encourage economic planners in all countries to optimize the use of environmental assets and of environmentally sound technologies, as well as to stimulate sustainable development. Such mechanisms should seek to influence economic decisions and activities, in both the private and the public sectors, at the national and international levels.

2. At the national level, economic mechanisms of this nature could include:

(a) Appropriate pricing policies;

(b) Systems of valuing environmental assets (e.g., natural resource accounting) and alternative measures of national economic performance;

(c) Fiscal incentives and penalties;

(d) Corporate accounting systems which internalize environmental costs;

(e) Tradeable permits for polluting emissions or for use of common goods.

3. Such national measures would affect the competitiveness of firms and thus the functioning of the international economy. There would be a need to harmonize them through standards and codes of conduct. In such harmonization, special attention would need to be paid to the needs and capacities of developing countries.

4. At the international level, action is needed to encourage a positive interaction between the functioning of the world economy and of international economic relations and the efforts of developing countries to undertake environmentally sound development. Specific issues which need to be addressed in this context, in addition to the need for additional financial and technological transfers referred to earlier include:

(a) The impact of debt-servicing and of shortfalls in commodity export earnings on development capacities generally and on resource depletion in particular;

(b) The use of environmental justifications for protectionist trade measures and for inappropriate conditionality.

VI. SUPPORTING MEASURES

(Sect. I, para. 15 (c), (o) and (n), (p), (s))

1. To integrate the environmental dimension into the development process, a series of instruments and measures are useful. They can be grouped in three broad categories:

1.1 Information on which to base decisions.

1.2 Tools and instruments facilitating the use of the information.

1.3 Informed and technically prepared people who can implement management and technical actions.

There are a number of actions at the international level in these areas.

2. The general area of information is concerned with:

2.1 Monitoring and assessment of environmental parameters, carried out mainly through the Global Environmental Monitoring System (GEMS) and Monitoring and Assessment Research Centre (MARC);

2.2 Presentation of environmental information in a manner useful for geographic based decisions, done mainly by the Global Resources Information Database (GRID) and other Geographical Information Systems;

2.3 Compilation, analysis, storage and dissemination information through referral and other systems including the International Register for Potentially Toxic Chemicals (IRPTC), INFOTERRA and others.

The main issue for consideration is to determine whether there are any significant gaps in the type, quantity and quality of information provided and whether access is adequate, and how these activities could contribute to the work of the Conference.

3. The field of tools, instruments and methods for considering the environmental dimension in the process of development is very broad, and ranges from general approaches, such as land-use planning, to more specific tools and procedures, such as environmental impact and risk assessment. The United Nations system has done considerable work on the conceptual and procedural aspects (UNEP, UNDP, ECE, the United Nations, World Bank, Department of Technical Co-operation for

Development of the United Nations Secretariat). The application of these tools is becoming more widespread, but more needs to be done.

The issue for consideration is how these methods can be used in the development of strategies at the international level and, more particularly, in national applications.

4. Education, training and promotion of public awareness and participation are an important part of United Nations activities. These include the International Environmental Education Programme, UNESCO/UNEP; training and human resource development programmes (UNEP, UNCHS, ILO and others) in a variety of environment- and development-related areas.

The issue for consideration is how activities in this area can be used to support work in dealing with the main environment and related development programmes.

5. Implications for the preparatory process

To determine how the ongoing activities of the United Nations system in this area can contribute to the work of the Conference and what actions by the Conference may arise from them, and identify where the gaps lie and action needs to be strengthened.